SIEMENS

ARCADIS Varic

SP

Update Instructions SP017/05/P

SP017/05/P: Bugfix 2 and interference suppression measures

Reason for Update: **Performance**

Urgency:	☐	Immediate	☑	Within	3	Months
Update material required for classic update?	☑	Yes	☐	No		
Remote update possible?	☐	Yes, without CSE	☐	Yes, with CSE	☑	No
File download available?	☐	Yes	☑	No		
Materials free of charge?	☑	Yes	☐	No		
Return of parts?	☐	Yes	☑	No		
Estimated completion time:	3,5	Hour(s)		Number of service technicians: 1		
Customer training?	☐	Yes	☑	No		

Affected systems/products/system-identifying IVK

Name	Material no.	Serial no.
ARCADIS Varic	80 80 017	10001 to 10305

Components affected/to be modified/IVK

Name	Material no.	Serial no.	Component status relates to
n.a.	n.a.	n.a.	n.a.

Chg.Ref.No.: 164141
Name: Arnold
Dept.: CS PS 24

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Print No.: SPR2-310.896.03.01.02
Replaces: n.a.

English
Doc. Gen. Date: 06.05

Document revision level

The document corresponds to the version/revision level effective at the time of system delivery. Revisions to hardcopy documentation are not automatically distributed.

Please contact your local Siemens office to order current revision levels.

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Affected systems/products

ARCADIS Varic systems, material number 80 80 017, serial numbers 10001 to 10305.

Reason for the update

- Correction of sporadic errors when moving the lifting column
- Correction of sporadic errors when playing back movie scenes
- Prevention of radiation blockage when printing images on a locally installed printer. The images to be printed are first sent to the filming task card and are temporarily stored. The collected images can consequently be printed with a time delay.
- The computer name can be changed without reinstalling the software.
- Image quality improvement for subtraction and roadmap
- Interference suppression measures for suppressing sporadic errors when moving the lifting column (error 10105).

Requirements

Update SP024/04/P must be performed on the affected systems. See “Affected systems, update SP024/04/P".

Imaging system software version VB11A must be available.

NOTE

This update SP017/05/P also includes all necessary work as published in Service Information SI SP005/05/I (bugfix 1, collimator, print name, printer LUT). As a result, SI SP005/05/P is not required for implementation.

Special tools/documents

Standard tool kit

Allen wrench set

Troubleshooting Guide SPR2-310.840.01.xx.xx.

Ordering information

The following update kit must be ordered from CSML (SAP Distribution Channel, factory 2050) or BU Logistics (factory BU) (only with an order to BU Logistics):

Bugfix2 Varic	**Material number 80 80 645**

Provide the system serial no. on the order!

Contents of the update kit

Update kit 80 80 645 contains the following parts:

Tab. 1

Item	Qty.	Material no.	Name
1	1	8080611	Interference suppression packet C06
2	1	8080637	Trunk circuit, interference suppression circuit
3	1	8081320	Main system SW VA01E
4	1	8081338	System CD VA00D
5	1	8080561	CD VB11A Bugfix 1 + 2 VB00A
6	1	SPR2-310.896.03	Update Instructions

Returns

n.a.

Safety information

General safety information (in existing documents)

⚠WARNING

Danger of injuries, death or material damage.

Non-compliance can lead to death, injury or material damage.

Please note:

- **➪ The product-specific safety notes in these instructions,**
- **➪ The general safety information in TD00-000.860.01... and**
- **➪ The safety information in accordance with ARTD Part 2.**

General electrical safety information

⚠WARNING

Electrical safety!

Non-compliance can lead to severe injury or even death and material damage.

- **➪ Parts under electrical voltage are accessible when the covers are open. To avoid danger, disconnect the system from the power supply prior to opening the covers. Disconnect the power plug.**
- **➪ If an uninterruptible power supply (UPS) is installed in the system, the voltage output of the UPS must also be switched free of voltage or the voltage output plug must be disconnected.**
- **➪ If work steps must be performed using electrical power, the general safety information according to TD00-000.860.01 must be observed.**

⚠CAUTION

Electrical voltage!

Non-compliance can result in material damage.

- **➪ When working on the system, ESD regulations must be observed.**

Radiation safety information

⚠WARNING

X-ray radiation!

Non-compliance can lead to illness, irreversible damage to body cells and the genotype, severe injury and even death.

During work on the system in which radiation must be released, the radiation protection directives and the rules for radiation protection according to ARTD-002.731.02.. must be complied with.

Please note:

- **Use available radiation protection devices.**
- **Wear radiation protection clothing (lead apron).**
- **Stay as far away as possible from the radiation source.**
- **Release radiation only if necessary.**
- **Set the radiation activity as low as possible. (Low kV and mA values, short radiation time)**
- **Release radiation for as short a time as possible.**
- **Checks requiring the release of radiation are identified by the radiation warning symbol shown on the left.**

Mechanical safety information

⚠CAUTION

Risk of burns from hot parts or components!

If not observed, minor to more severe burns, especially on the hands, can occur.

- **Parts and components (e.g., power components, cooling fin, electromagnetic brakes) that can exceed 50 degrees Celsius during operation are accessible after the covers are opened. To avoid burns, switch the system off prior to touching parts or components and allow at least 5 minutes of cooling.**

⚠CAUTION

Risk of injury from mechanical parts!

If not observed, minor to more severe injury, especially to the hands, can occur.

- **Parts such as flat plugs, threaded bolts, cut-off cable ties and component edges that, if care is not taken, can cause crushing, scrapes and cuts to the skin, particularly to the hands, can be touched after the covers are opened.**
- **Perform the particular work steps with special care and attention to detail.**
- **If needed, wear working gloves.**

Safety information - risk of infection

⚠WARNING

Risk of infection due to pathogens!

Non-compliance can lead to severe injury and even death.

- **This product can be contaminated with infected blood or other bodily fluids.**
- **Avoid all contact with blood or other bodily fluids!**
- **Strictly observe the safety information in ARTD-002.731.37.. regarding prevention of infectious diseases during customer service calls.**

Protective conductor resistance test information

Observe the instructions in the "Safety Rules for Installation and Repair" (ARTD-002.731.17 ...).

The protective conductor resistance must be measured after every intervention in the system.

However, documentation of the measured values is required only during periodic safety checks.

If parts/components that can significantly influence the protective conductor resistance (e.g. replacement of the power cable, replacement of the power-up module, replacement of multi-pole connection cables, which also create the protective conductor connection between system parts (e.g. monitor cable or C-arm cable)) are replaced or if protective conductor connections have been repaired, the protective conductor resistance must be measured. The values are to be documented and assessed in the protective conductor resistance report.

NOTE

For evaluation purposes, the first measured value and the values documented during maintenance or safety checks are to be compared to the measured values. A sudden or unexpected increase in the measured values may indicate a defect in the protective conductor connections - even if the limit value of 0.2 ohms is not exceeded. (Protective conductor or contacts).

The measurement must be performed according to DIN VDE 0751, Part 1 (see ARTD Part 2). In this case the protective conductor resistance for all touchable conductive parts must be measured during the normal operating state of the system.

Make sure that control cables or data cables between the components of the system are not mistaken for a protective conductor connection.

During the measurement, the power cable and additional connection cables which also create the protective conductor connection between system parts (e.g. monitor cable between the basic unit and monitor trolley) must be moved section by section to detect cable breaks.

The protective conductor resistance may not exceed 0.2 ohms.

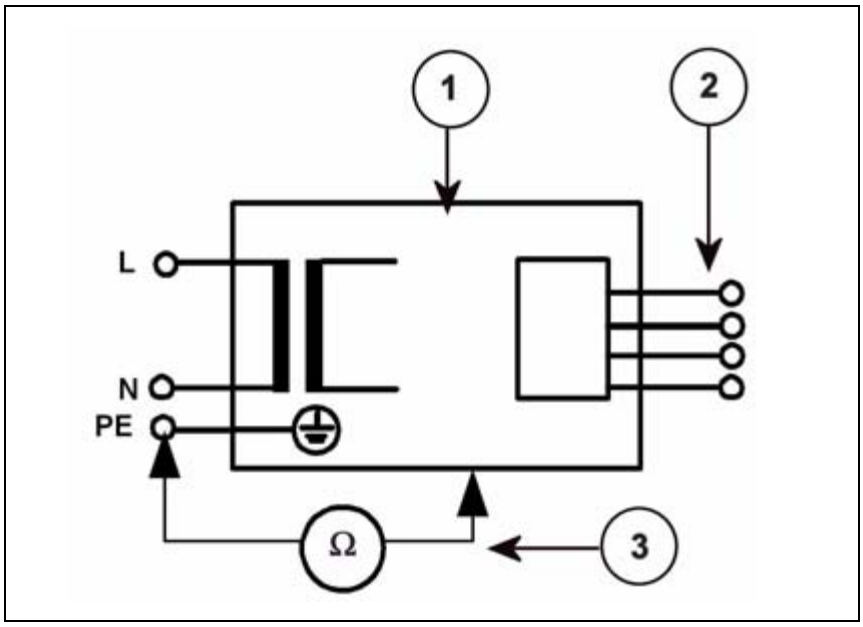


Fig. 1: Measuring circuit for measuring the protective conductor resistance for units that are disconnected from power, in compliance with DIN VDE 0751-1/2001-10, Fig. C2.

Pos. 1 = System

Pos. 2 = Application part type B (if available)

Pos. 3 = Measurement setup (integrated into measuring device)

Data to record

Service key

- Record the service key .....
  - It can be found, for instance, in the system binder.

Computer name

- Record the computer name.....
  - It can be found in the service software under Configuration/Local host/TCP IP LAN/Computer name.

Administrator password

- Assign and record the administrator password .....
  - The password is assigned in the service software under Configuration/Local host/Users.

Backup

- Perform a backup operation.
  - This is described in the "Troubleshooting Guide" for example.

Exam set

- Open the service software.
- Click "Reports".
- Click "Exam sets" under "Remote diagnostics".
  - ➪ This generates the "Examination set configuration" report.
- Click "Exit".

Burning log files to CD

- Insert a blank CD.
- Select "Event log".
- In the upper command line, click "Burn log files".
  - ➪ This generates the log files.
  - ➪ This saves all files located in the extract folder on CD-ROM.
- Remove the CD from the CD-ROM drive and label it.

Importing the main system software

- Open the service software (local service).
- Select "Main system".
  - If the "Main System" button is not visible, check the connection between the monitor cart and the main system.

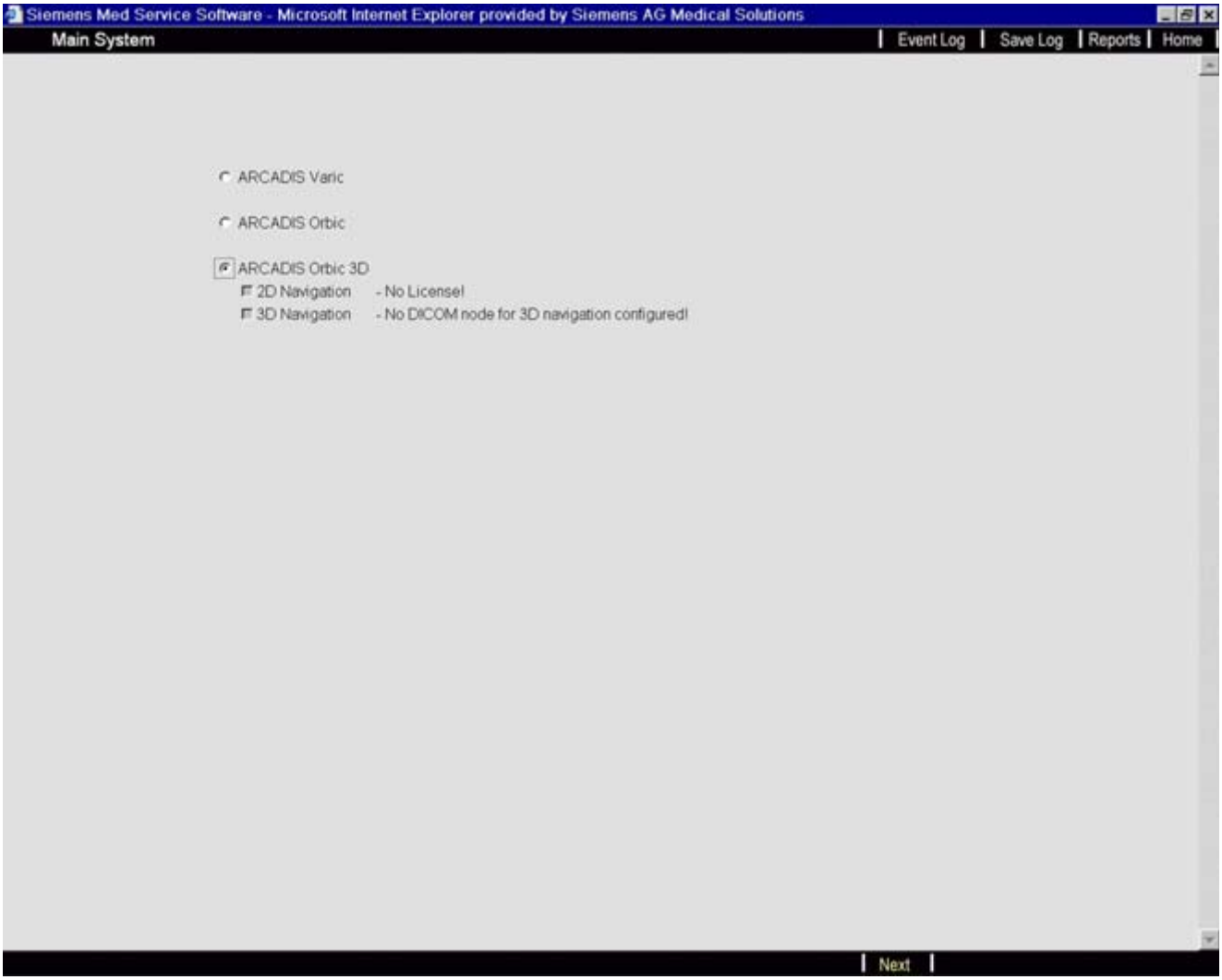


Fig. 2: MainSystem_ARCADISOrbic_3D

- Click "Next".
  - Do not make any changes!

Main system download

- Select "C-arm" under "Download".
  - The installed programs are displayed under "Current ver.".

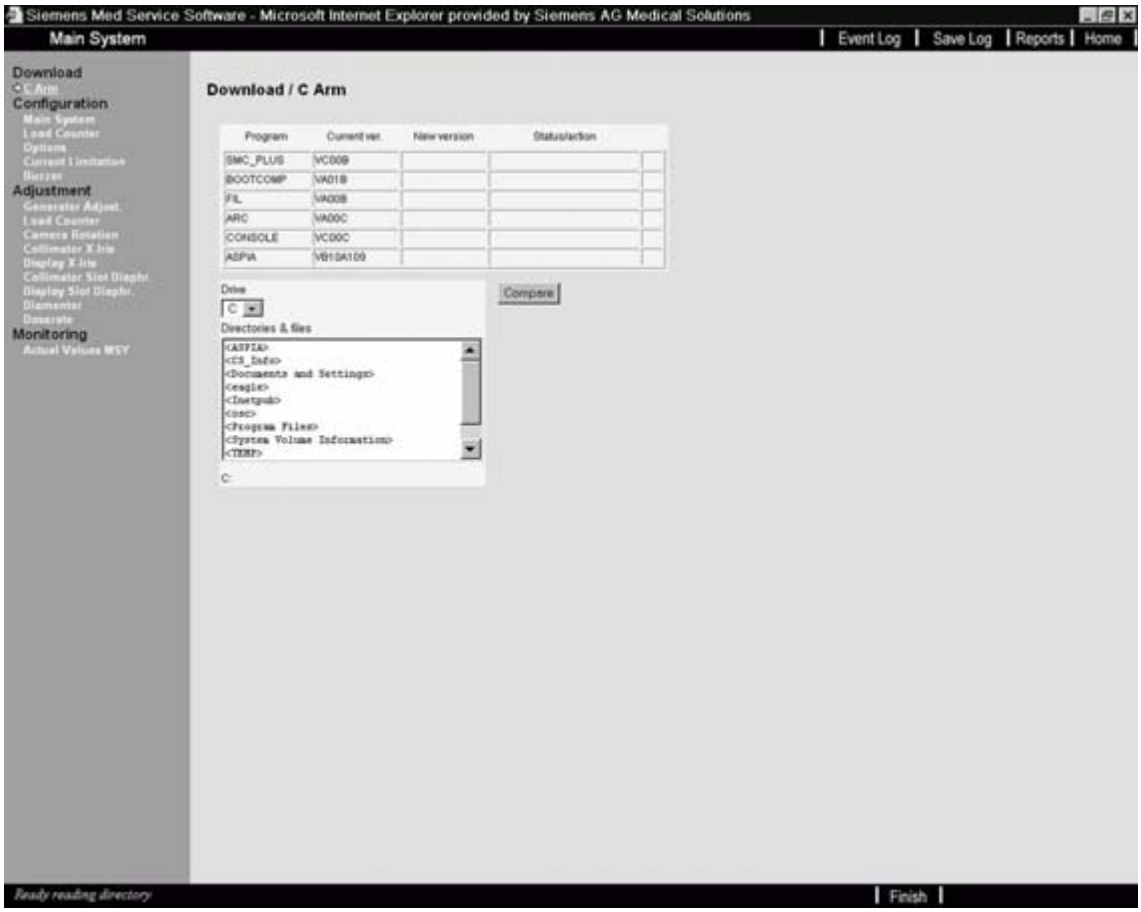


Fig. 3: Main System >> Download >> C-arm

- Insert the “Main System VA01E” CD into the CD-ROM drive.
- Select CD drive "R" under "Drive".
- Select the file to be checked “SMC_Plus_VC01E.BIN “ under “Directories & files”.
- Click “Compare”.
  - The file version is displayed under "New version”, and a recommended action (e.g., update necessary) is displayed under "Status/action”.
  - A checkmark appears automatically in the last column, if this program has to be installed again.

    ➪ “Update necessary” is displayed.
- Click “Download”.
  - Only one program should be selected. Otherwise, installation problems may occur.

    ➪ The current status is displayed in the "Status/result" column of the Download/C-arm table.

    ➪ The software is installed.

    ➪ The main system restarts.
- Wait until the "Ready" message is displayed in the "Status/result" column.
- Click "Finish".

- Remove the CD from the CD-ROM drive.

NOTE

It is not necessary to perform a restore operation or make any adjustments after a main system software installation. The parameters are stored in EE Prom.

A restore is required only if the D1 of the main system has been replaced.

Subtraction parameters

- Click "Configuration" in the service software.
- Click "Next".
- Select "Subtraction parameter" under "Imaging system".

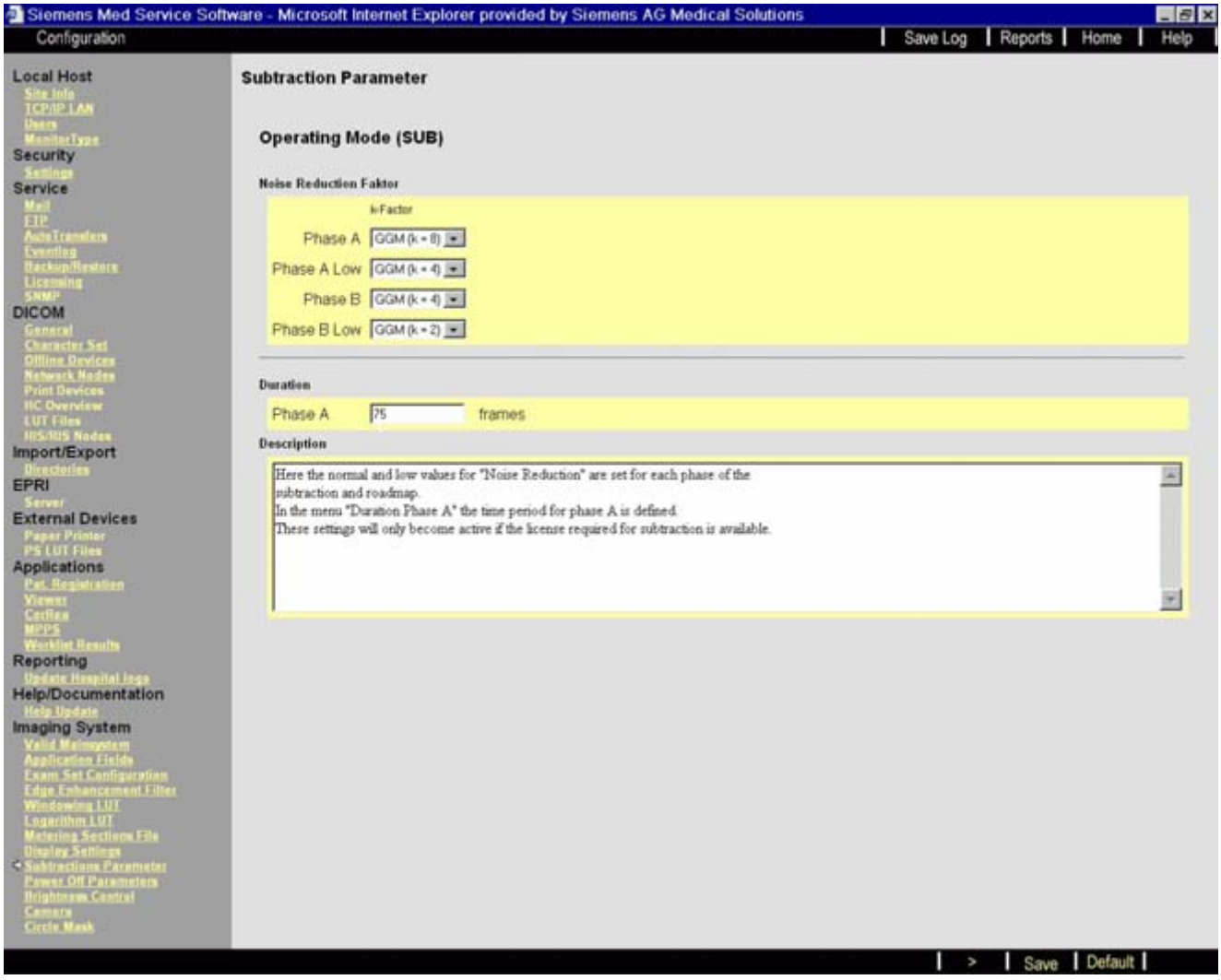


Fig. 4: Configuration imaging system subtraction parameter operating mode

Subtraction operating mode (DSA)

- Verify that the k factor "GGM (k=8)" is set under Phase A.
- Verify that the k factor "GGM (k=8)" is set under Phase A Low.
- Verify that the k factor "GGM (k=8)" is set under Phase B.
- Verify that the k factor "GGM (k=4)" is set under Phase B Low.
- Verify that "75" frames are set under Phase A.
- Select "Save".
- Close the "Subtraction parameters were successfully saved" status message by clicking "OK".

Roadmap operating mode

- Select ">".

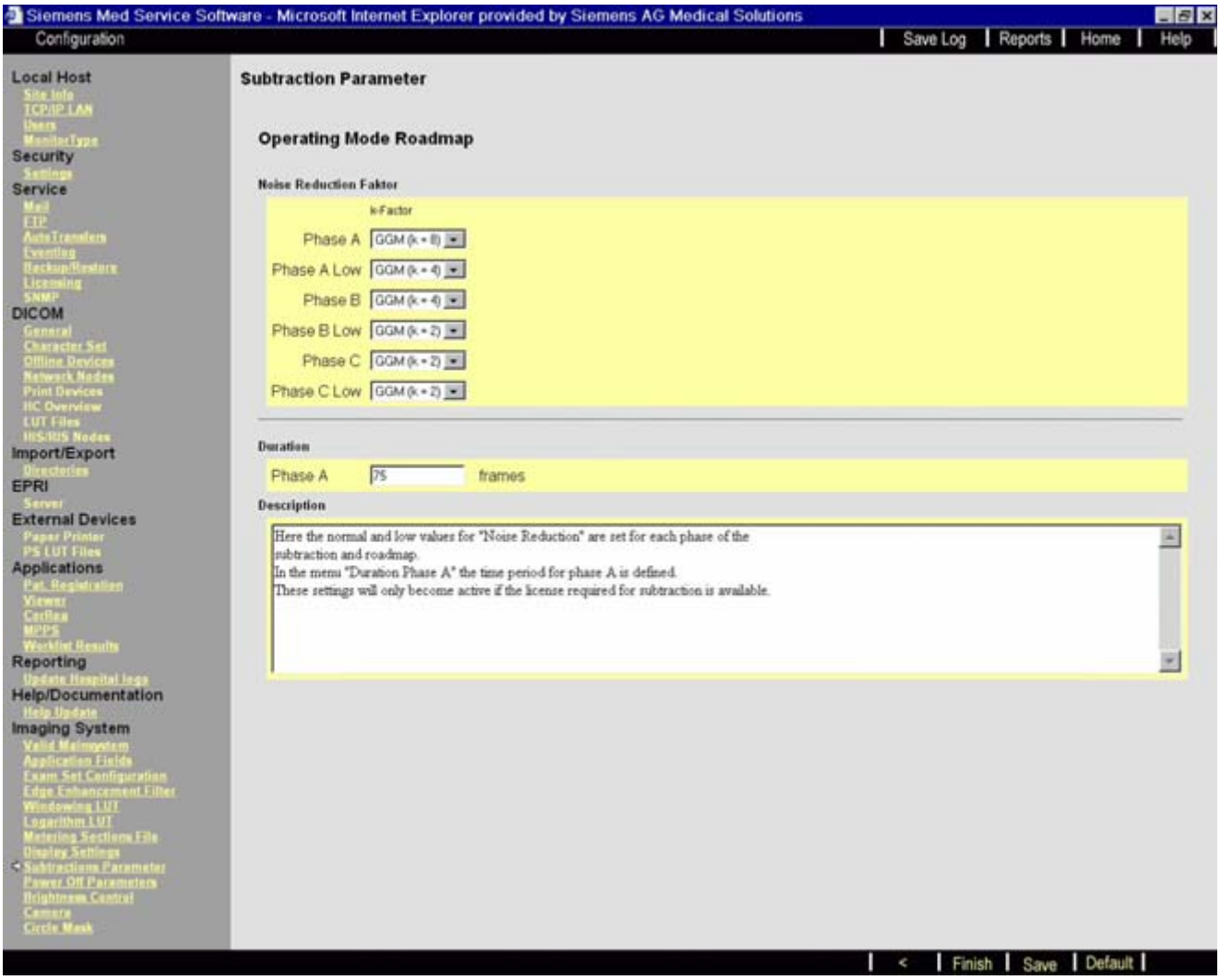


Fig. 5: Configuration imaging system subtraction parameter operating mode roadmap

Noise reduction factor

- Verify that the k factor "GGM (k=8)" is set under Phase A.
- Verify that the k factor "GGM (k=8)" is set under Phase A Low.
- Verify that the k factor "GGM (k=8)" is set under Phase B.
- Verify that the k factor "GGM (k=8)" is set under Phase B Low.
- Verify that the k factor "GGM (k=4)" is set under Phase C.
- Verify that the k factor "GGM (k=2)" is set under Phase C Low.

Duration

- Verify that "75" frames are set under Phase A.
- Select "Save".
- Close the "Subtraction parameters were successfully saved" status message by clicking "OK".

Brightness control

This is where the actual brightness value for brightness control of the imaging system is set.

- Select "Brightness control" under “Imaging system”.

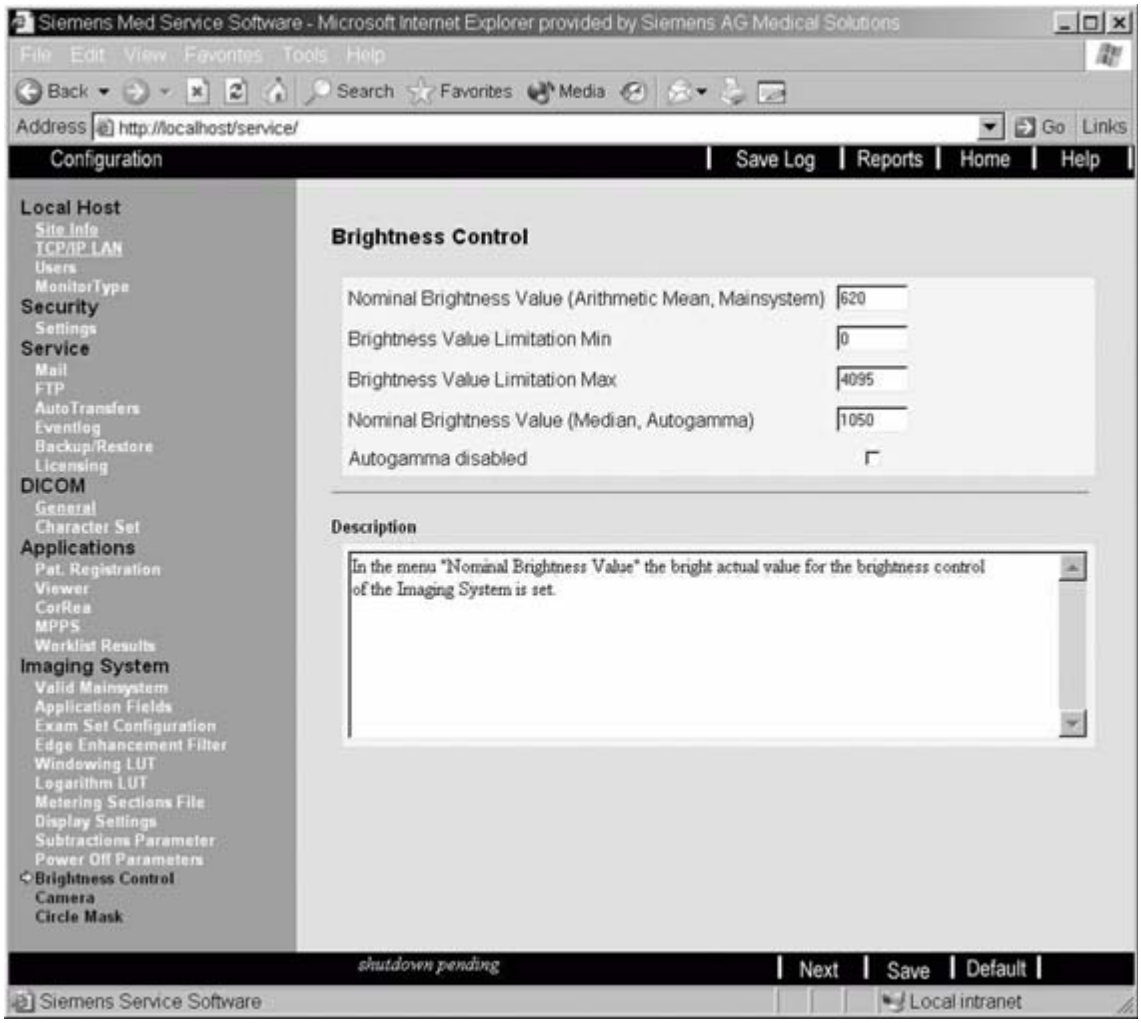


Fig. 6: Imaging System >> Brightness Control

- Verify that the value "1000” is set under Nominal brightness value.
- Verify that the value "940” is set under Nominal brightness value limitation min.
- Verify that the value "1060” is set under Nominal brightness value limitation min.
- Enter the value "1550" under Nominal brightness value (median, autogamma).
  - The old value is "1750".
- Click "Save".
- Close the “Brightness control values were successfully saved” status message by clicking “OK”.

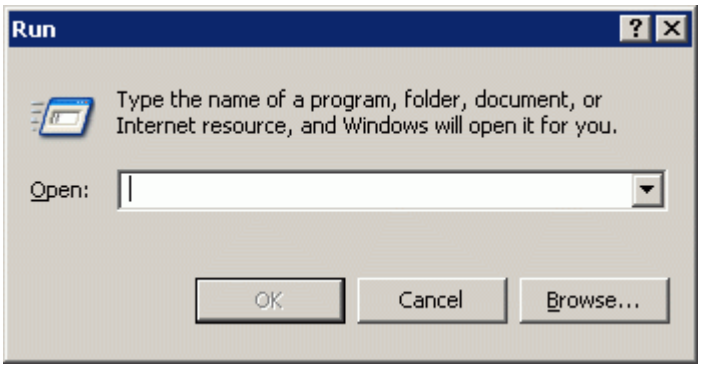
Importing Bugfix Update VB00A

NOTE

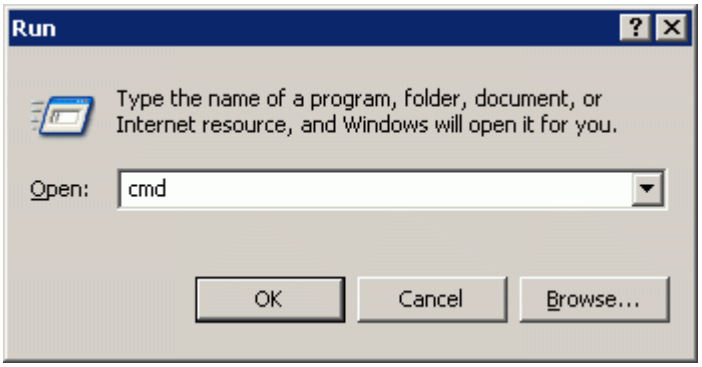
The “Bugfix Update VB00A” CD contains the “Bugfix1” update (installation by calling up the batch file “install.bat”) and the “Bugfix2” update (installation by calling up the batch file “install_bugfix2.bat”).

Comply with the installation sequence - bugfix 1 followed by bugfix 2.

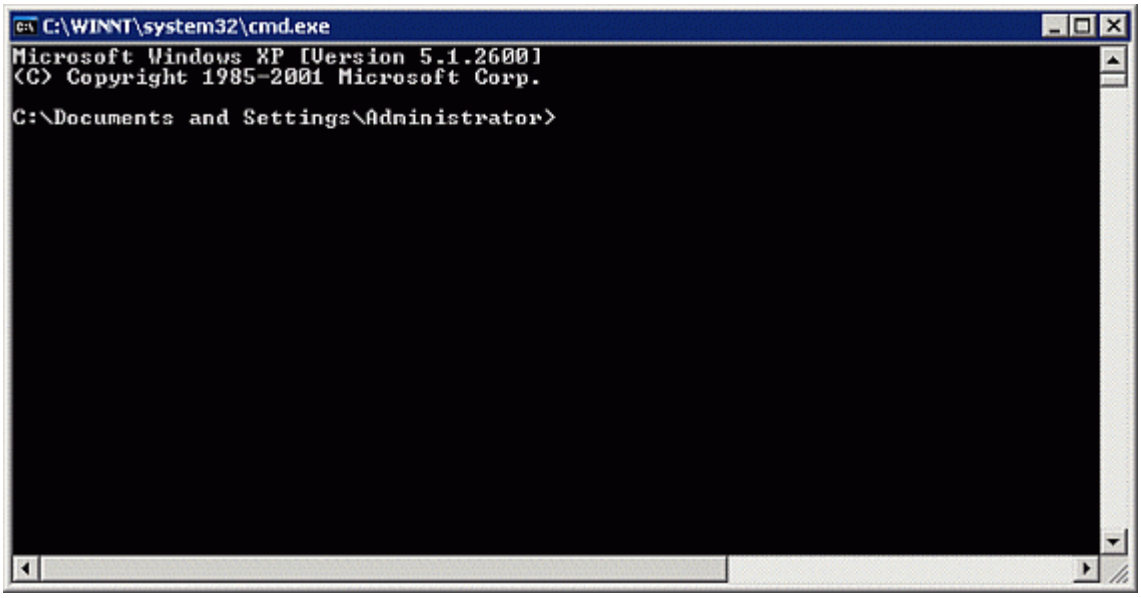
- Log on as administrator.
  - This is described in the "Troubleshooting Guide", for example.
- After logging on as administrator, insert the “Bugfix Update VB00A” CD.
- Click "Start" in the Windows task bar.
- Click "Run".



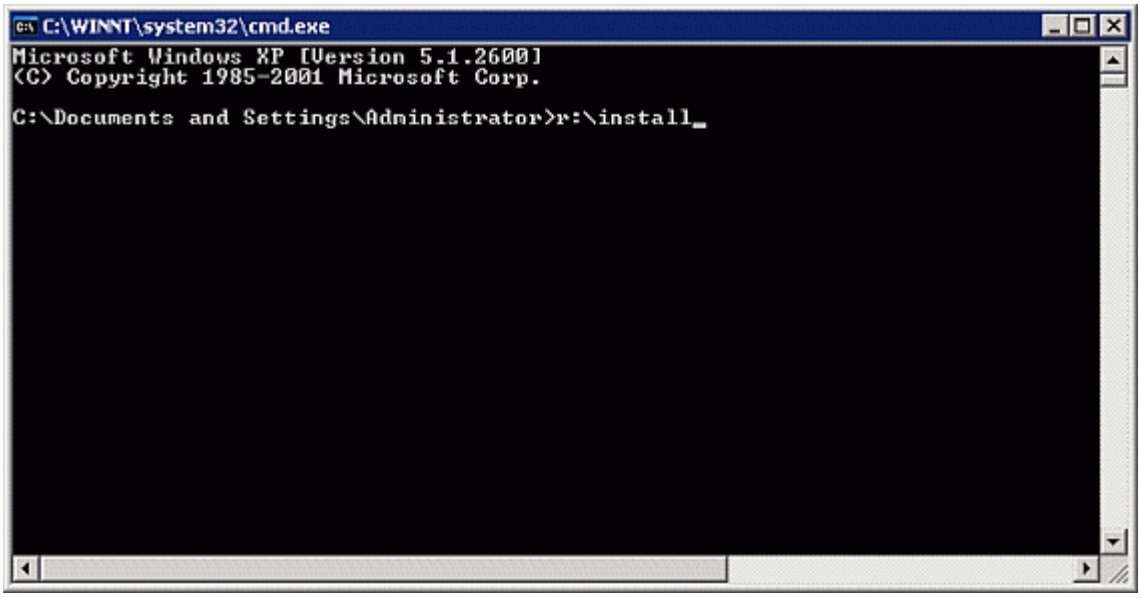
- Enter "cmd".



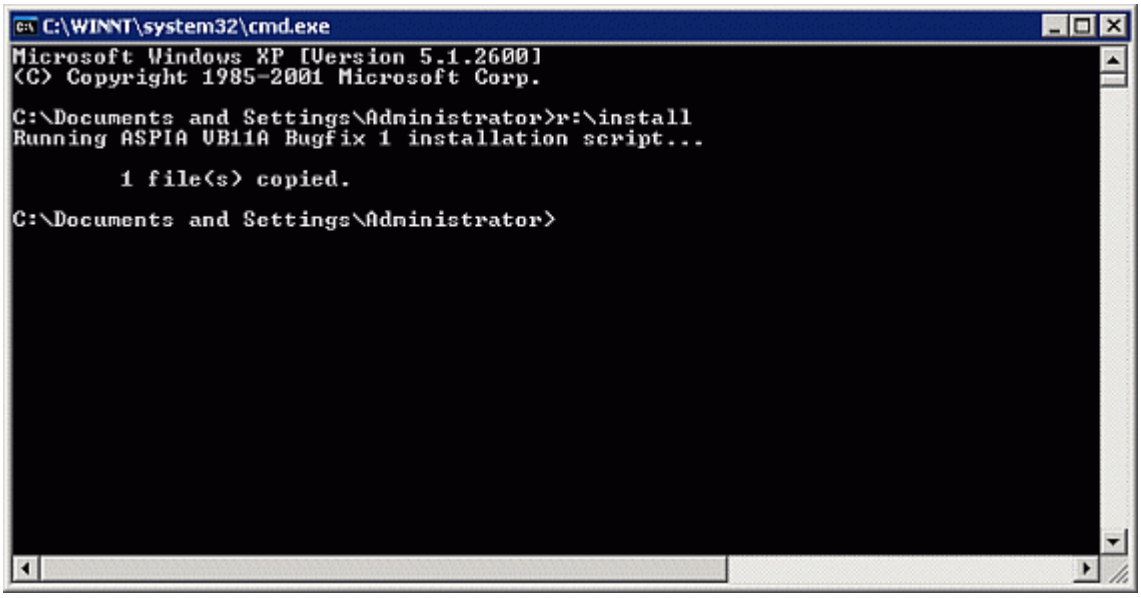
- Click "OK".
  - ➪ The following path is displayed: “C:\Documents and settings \ Administrator>”.



- Enter “r:\install”.



- Press "Enter".
  ➪ The bugfix1 update is installed.



➪ The Setup wizard is automatically displayed.

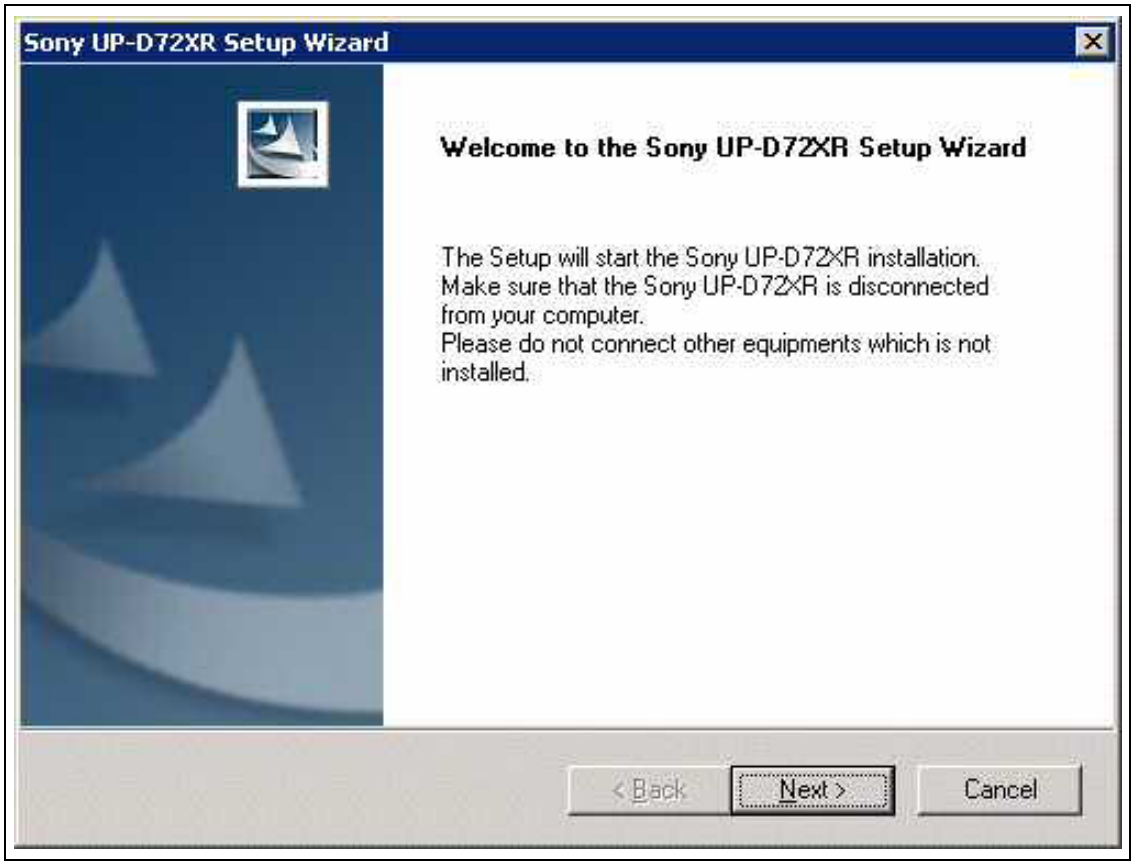

Sony UP-D72XR Setup Wizard
Welcome to the Sony UP-D72XR Setup Wizard
The Setup will start the Sony UP-D72XR installation.
Make sure that the Sony UP-D72XR is disconnected from your computer.
Please do not connect other equipments which is not installed.
< Back
Next >
Cancel

Fig. 7: Sony 3

- Click "Cancel" since no printer is to be installed.
- Close the following message with "Yes".

- Enter “r:\install_bugfix2”.

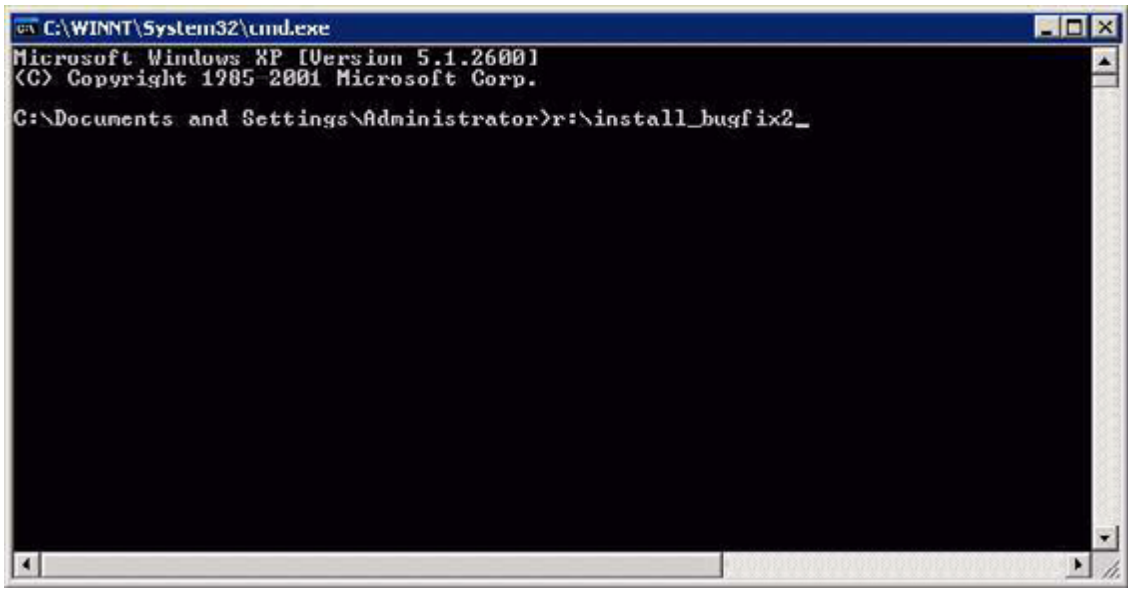


Fig. 8: install_bugfix2

- Press "Enter".

  ➪ The bugfix2 update is installed.

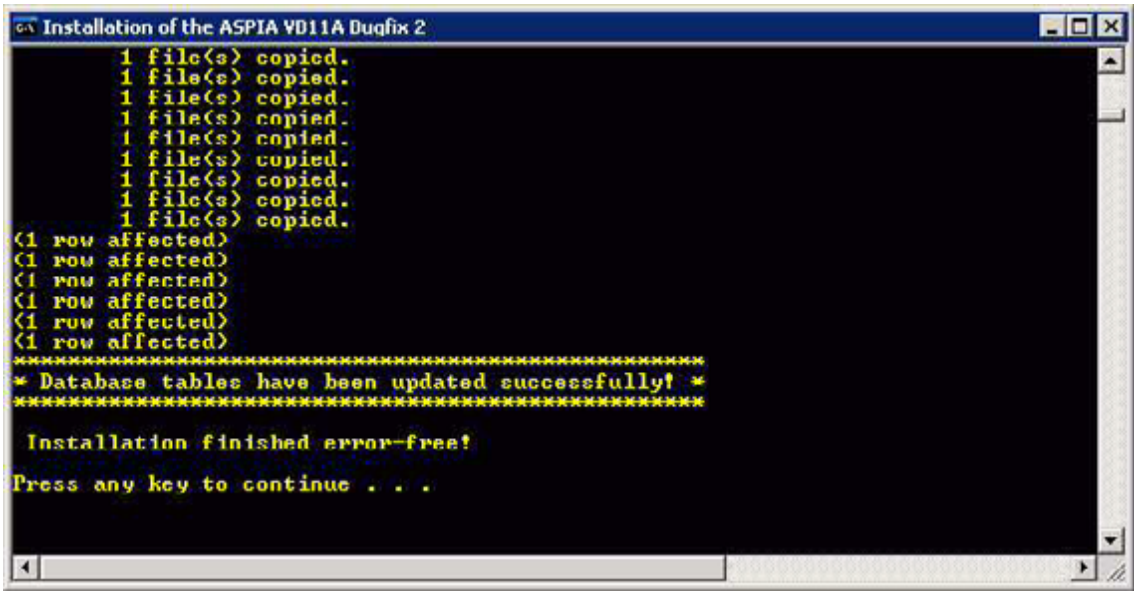


Fig. 9: install_bugfix2_finished

  ➪ “Installation finished error-free” is displayed following successful installation.

- Press the space bar.
- Enter "Exit" in the command window and press the Enter key.

  ➪ The command window closes.

- Remove the CD from the CD drive.

- Log off as administrator.
  ➪ The system restarts the imaging system.
- Switch off the system via the off switch of the monitor cart and wait until it is completely shut off.
- Switch the system back on via the on button of the monitor cart and wait for it to start-up.
  ➪ All changes are accepted.

Importing the characteristic curves

- Open the service software.
- Select "Configuration".
- Click "Next".

LUT files

- Select "PS LUT files" under External devices.
- Ensure that "Use LUT for postscript printers” is selected.
- Ensure that "Use floating zoom factors” is not selected.
- Insert the system CD and close the tray.
- Select "R:\" under Drive.
- Select “Printer LUT" under "Source path".
  - The greater the number of LUT files, the lighter the printed image is.
- Select "PrinterLUT_Gamma_1_2" under "Source path”.
  - Always only one printer LUT can be selected.
- Click "Import".
  ➪ The following is displayed: “File successfully copied”.
- Click "OK".
- As described above, select and import all printer LUTs up to PrinterLUT_Gamma_1_9.
- Verify that the “PrinterLUT_Gamma_2” characteristic curve is displayed under “Current LUT”.
- If this is not displayed, select the “PrinterLUT_Gamma_2” LUT under "PS LUT directory” and press the "Select" button.
- Click "Save".
- Close the service software.

Printer test

NOTE	If a printer is present, perform the printer test as follows.

Preparation

- Check whether the system CD is available. If it is not available or the printer LUT characteristic curves are not on the CD, the characteristic curves can be downloaded from the intranet and burned to CD.

Printing a test image

- Open the service software.
- Call up the "SMPTE" test image under Service patient.
- Create a film request.
- If film can be used for printing, use it for the test.
- Select "OK".

  ➪ A test image is printed.

Print quality

- Compare the "SMPTE" test image to the "SMPTE" test image displayed on the monitor. The minimum contrast in the 5% field and in the 95% field must be visible.

Result 1: Visual image impression approximately identical

The image impression of the printed "SMPTE" test image is identical to the "SMPTE" test image displayed on the monitor.

- No further action is necessary.

Result 2: Test image is lighter

The printed "SMPTE" test image is lighter than the "SMPTE" test image displayed on the monitor.

- Select "Configuration" in the service software.
- Click "Next".
- Select "PS LUT files" under External devices.
- Ensure that "Use LUT for postscript printers" is selected.
- Ensure that "Use floating zoom factors" is not selected.
- Verify that the “PrinterLUT_Gamma_2” characteristic curve is displayed under “Current LUT”.
- If this is not displayed, select the “PrinterLUT_Gamma_2” LUT under "PS LUT directory” and press the "Select" button.

- Generate another "SMPTE" test image and compare it.

Result 3: Test image is darker

The printed "SMPTE" test image is darker than the "SMPTE" test image displayed on the monitor.

- Select "Configuration" in the service software.
- Click "Next".
- Select "PS LUT files" under External devices.
- Select the “PrinterLUT_Gamma_1_6” characteristic curve under “PS LUT directory”.
- Click "Select".
  ➪ The selected characteristic curve is displayed under Current LUT.
- Click "Save".
- Remove the system CD and close the tray.
- Generate another "SMPTE" test image and begin again at the "Print quality" section.

NOTE	**If the test image is again too dark or too light, activate other printer LUTs, i.e., instead of PrinterLUT_Gamma_1_6, use, for example, PrinterLUT_Gamma_1_4 for a test image that is too light or PrinterLUT_Gamma_1_8 for a test image that is too dark.**

Final test

Radiation summary report

- Make an exposure for test purposes and then print the radiation summary report.

Installing the interference suppression filter for the camera voltage supply (M13)

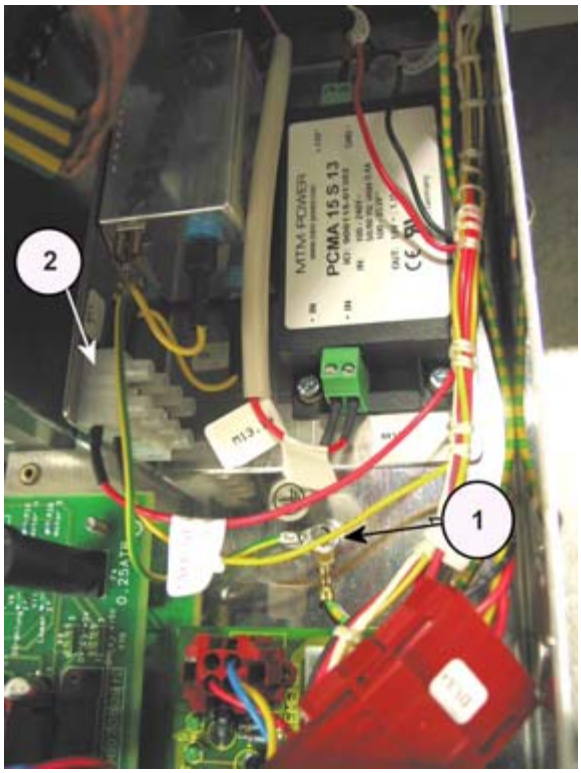


Fig. 10: Interference suppression filter for M13

After the basic unit cover is opened, voltage supply M13 is visible on the right side next to the vertical lifting column.

- Switch off the system and wait until all components are deenergized.
- Disconnect plug X10 of the monitor cart cable from the basic unit.
- Remove the basic unit cover.
- Remove voltage supply M13 (4 screws).
- Disconnect all connecting cables from voltage supply M13.
- Remove voltage supply M13 from the basic unit.
- To facilitate assembly, connect line M13.IN.(0 V) to clamp X21.1 (see 2/Fig. 10 "Interference suppression filter for M13") and line M13.IN.(230 V) to clamp X21.2 (see 2/Fig. "Interference suppression filter for M13") of the securing bracket prior to mounting the bracket on the basic unit.
- Place voltage supply M13 on the securing bracket of the interference suppression filter.
- Attach both lines M13.IN (from the output of the interference suppression filter) to clamps IN of voltage supply M13.
- Attach line M13.GND to clamp GND of voltage supply M13.
- Attach line M13.+13V to clamp +13V of voltage supply M13.

- Use the available screws to reattach the securing bracket with the voltage supply to the basic unit.
- Clamp the protective conductor from the interference suppression filter together with the available protective conductors to the grounding connection (see 1/Fig. 10 "Interference suppression filter for M13"). Make sure that the protective conductor connection makes good contact.

Installing the interference suppression filter for the RNH relay

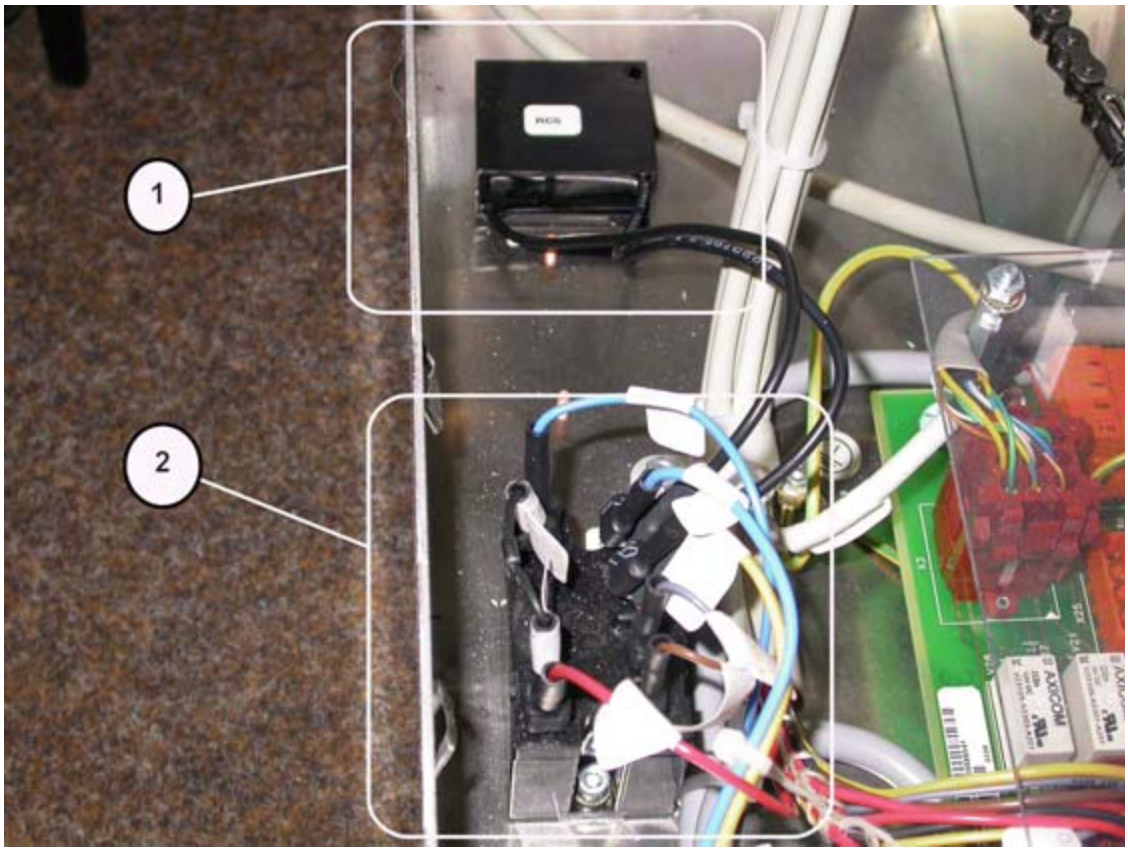


Fig. 11: Interference suppression filter for RNH relay

After the basic unit cover is opened, the RNH relay is visible on the left side of the chassis base (see 2/Fig. 11 "Interference suppression filter for RNH relay").

- Disconnect lines RNH.1 and RNH.2 from the relay.
- Connect interference suppression filter RC5 to relay contacts RNH.1 and RNH.2.
- Connect previously disconnected lines RNH.1 and RNH.2 to the dual plug sleeves on RNH.1 and RNH.2.
- The bonding surface (see 1/Fig. 11 "Interference suppression filter for RNH relay") should be free of grease and clean. Clean it if necessary prior to gluing.
- Remove the protective film from the double-sided adhesive tape and secure the interference suppression filter to the chassis base (see 1/Fig. 11 "Interference suppression filter for the RNH relay").

Final Work Steps

- Refit all covers. Make sure the protective conductors make good contact.
- Perform the protective conductor test according to ARTD-002.731.17.... Comply with the information regarding protective conductor testing in this document.
  - ➪ The protective conductor resistance may not exceed 0.2 ohms.

Customer information

- Inform the customer that images to be printed on a local printer are first sent to the filming task card and are temporarily stored.
  - ➪ The collected images can consequently be printed with a time delay.
  - ➪ This prevents blockage of radiation release when printing to a local printer.

NOTE	**Use of the filming task card is described in the system operating instructions.**

Update no. **SP017/05/P** was performed.

Material number:	.....		
Serial number:	.....		
Customer:	.....	City:	.....
Customer number:	.....		
Name (CSE):	.....	Telephone:	.....
Country:	.....	City:	.....
Date:	.....	Signature:	.....
Comment:	.....		
	.....		

NOTE

After completing the update, make a copy of this page, fill it out and file it in the appropriate system binder/user handbook.